



News Release

Defense Advanced Research Projects Agency

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3701 North Fairfax Drive
Arlington, VA 22203-1714

IMMEDIATE RELEASE

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DARPA RECOGNIZES OUTSTANDING PERFORMANCE BY AGENTS AND CONTRACTORS

Director of the Defense Advanced Research Projects Agency (DARPA) Anthony J. Tether today announced the winners of the 2002 DARPA Awards for Excellence. These awards, which have been presented at DARPA’s Systems and Technology Symposiums since 1985, are designed to recognize outstanding performance by agents and contractors supporting DARPA programs.

DARPA selected Miguel Nicolelis, Duke University, Durham, N.C, and John Chapin, State University of New York Health Science Center, Brooklyn, to receive the 2002 Award for Sustained Excellence by a Performer for their work on revolutionary projects to extract neural codes from the brain to understand and exploit sensory and motor work. Nicolelis and Chapin designed, fabricated and implemented new, high-density, wireless interfaces with neural brain tissue, and then used the interfaces to extract neural codes at higher densities than ever before achieved. The resulting signals have been used to control a robotic arm directly from the brain and to control the movements of small animals remotely through a laptop computer. During tests, a monkey was able to control the movements of a robotic arm in another room by generating the executive command in the brain. In making the award, Tether noted, “This ground-breaking work will lead to revolutionary defense applications.”

Cynthia Hanson, from the Space and Naval Warfare Systems Center, San Diego, Calif., received the 2002 Award for Outstanding Performance by a Government Technical Agent for her work supporting DARPA programs. She has a high degree of technical expertise across a number of disciplines, and provides timely contractual assistance. She has been invaluable in identifying potential customers for DARPA technologies. As Tether explained during the awards ceremony, “Dr. Hanson provides continuity and corporate knowledge to the management of DARPA programs, without usurping the DARPA program manager’s authority and responsibility. She is a pleasure to work with, and an outstanding example of the indispensable support that DARPA receives from its agents in the Military Services.”

Isaac Chuang, Associate Professor at Massachusetts Institute of Technology, Cambridge, Mass., and leading a research team from IBM Almaden Research Center, San Jose, Calif., Stanford University, Stanford, Calif., and University of Calif., Davis and Berkeley, was honored with the 2002 Award for Significant Technical Achievement for the first demonstration of exponentially fast factoring on a quantum computer, and the realization of the world’s largest

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quantum computer. The experiment used a custom-synthesized molecule as a computer, with five fluorine atoms and three carbon atoms serving as a total of seven quantum bits, to factor the number 15. The result conclusively showed that quantum computers are experimentally realizable, and demonstrated methods for engineering and controlling large-scale quantum computers. Tether noted, “This achievement lays the groundwork for large-scale quantum computers, which will provide revolutionary capabilities for military command and control and information security in the future. Quantum computing now is seen as a viable alternative computing technology that will allow scaling beyond the limits of Moore’s law.”

Tether presented the 2002 Award for Outstanding Performance by a Small Business Contractor to GASL Inc., Ronkonkoma, N.Y., for their work to develop and demonstrate low-cost, free flight scramjet test techniques. Within the framework of a Phase II Small Business Innovation Research project, GASL developed and tested a baseline scramjet engine that could be launched from a light gas gun and launched four hypersonic projectiles, including two that demonstrated the first-ever free flight of a hypersonic projectile powered by a scramjet engine burning hydrocarbon. The scramjet flights provided early data for a scaled down engine. “GASL has truly pushed the state of the art in scramjet technology, and has demonstrated applications that have a direct and near-term impact on national defense capabilities,” Tether noted.

The awards were presented in Anaheim, Calif., during a ceremony at DARPATech 2002, DARPA’s 22nd Systems and Technology Symposium.

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Media with questions, please contact Ed Budzyna, ebudzyna@darpa.mil, (703) 696-2404.